

## Understanding and Improving Survey Data Quality: Key Insights from NSSE

Shimon Sarraf  
Asst. Director for Survey Operations & Project Services  
National Survey of Student Engagement  
Indiana University School of Education



OCAIR Meeting  
February 12, 2021



## Goals

- Review NSSE studies aimed at understanding and improving survey data quality
- Inspire survey research methodology studies at your campus
- Share your good ideas with others
- Q&A

## Topics

Survey Panels

Incentives

Optimizing survey  
format for small screen  
devices

Campus promotions

Social media

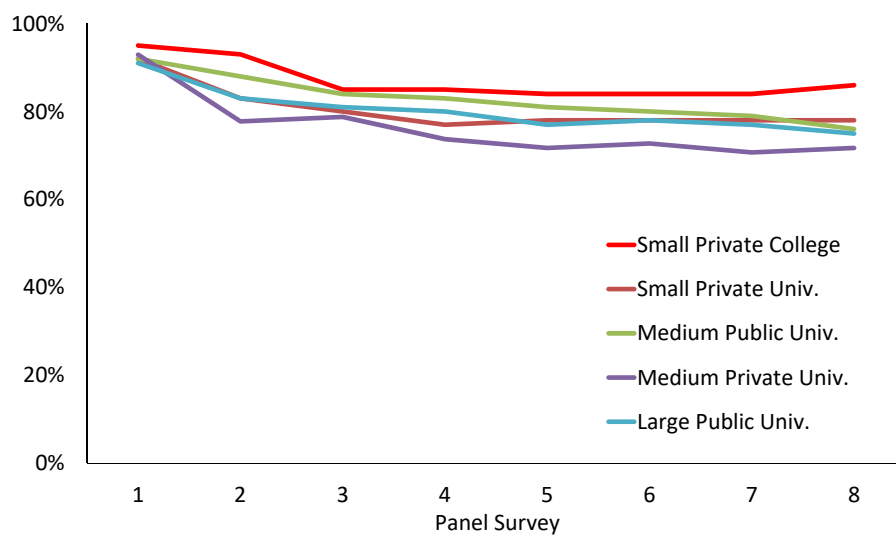
Learning management  
systems

How much data is  
enough?

## Survey Panels

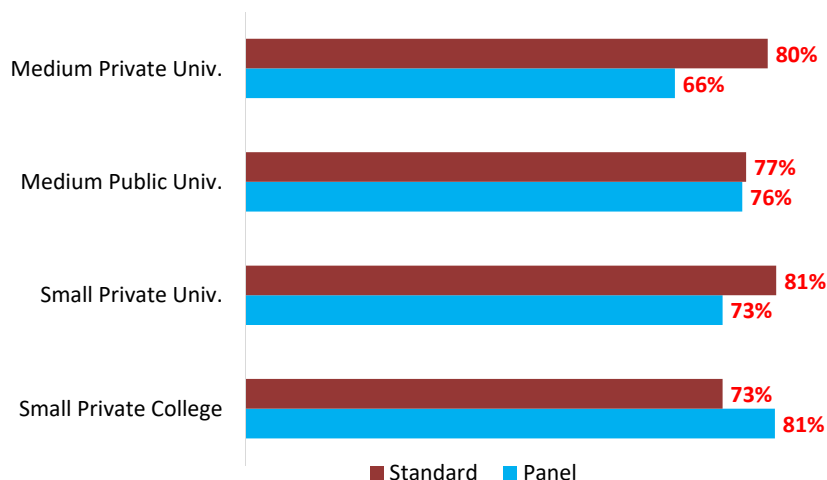
What happens when you administer NSSE to a survey panel as 8 mini-surveys with under 10 questions each?

### Survey Panel: Response Rates



## Survey Panel: Item Completion

Percent of respondents completing 90% or more of all questions



## Mobile Optimization

If you optimize NSSE for smartphones, how does this effect response rates and item completion?

# Mobile Optimization

## Optimized – Vertical Position

During the current school year, about how often have you done the following?

Prepared two or more drafts of a paper or assignment before turning it in

Very often Often Sometimes Never

Come to class without completing readings or assignments

Very often Often Sometimes Never

Attended an art exhibit, play, or other arts performance (dance, music, etc.)

Very often Often Sometimes Never

Asked another student to help you

## Unoptimized – Vertical Position

During the current school year, about how often have you done the following?

Selected a course or section of a course to complete a requirement in other ways

Very often Often Sometimes Never

During the current school year, about how often have you done the following?

Completed a paper, thesis, or other assignment before turning it in

Very often Often Sometimes Never

During the current school year, about how often have you done the following?

Selected a course or section of a course to complete a requirement in other ways

Very often Often Sometimes Never

During the current school year, how much has your coursework emphasized the following?

Selected a course or section of a course to complete a requirement in other ways

Very much Quite a bit Some Not much

# Mobile Optimization: Early Abandonment

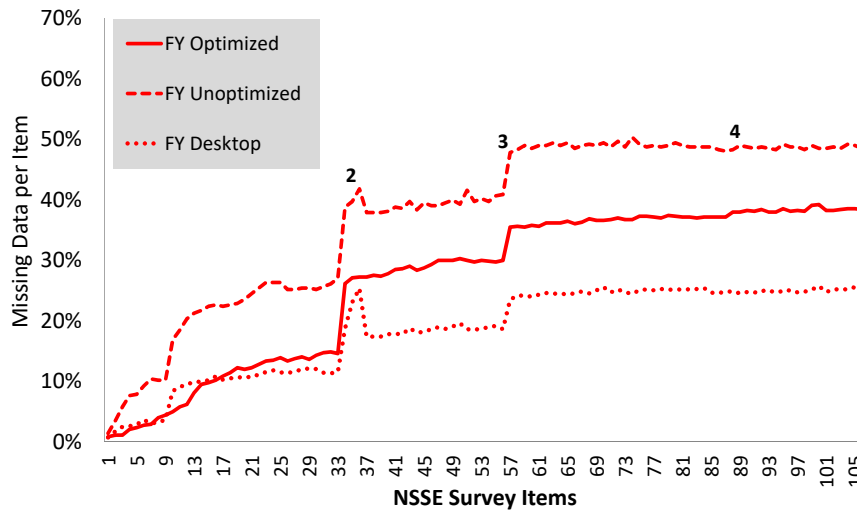
Optimized group less likely to abandon the survey upon viewing the very first page of survey items.

Group	Optimized	Unoptimized	Desktop
First-Year Students	5%	26%	12%
Seniors	4%	22%	10%

5

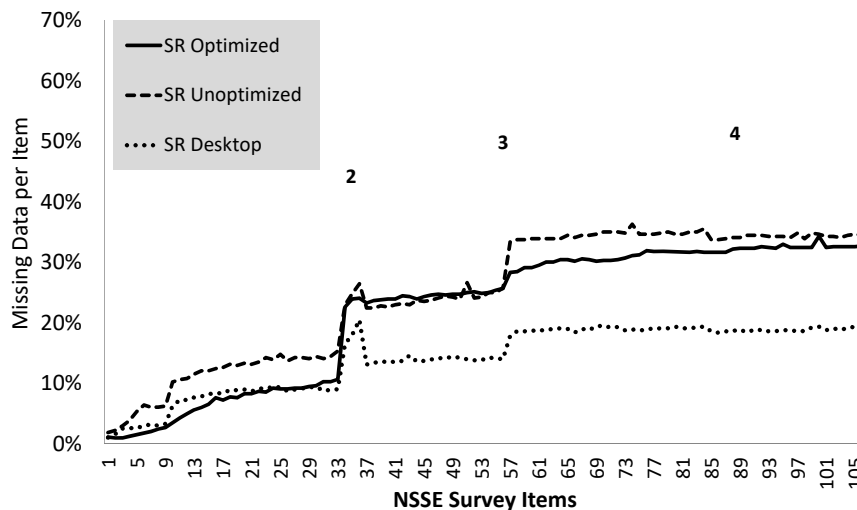
## Mobile Optimization: Missing Data

Optimization appears to reduce missing data though variation exists between first-year and senior populations.



## Mobile Optimization: Missing Data

Optimization appears to reduce missing data though variation exists between first-year and senior populations.

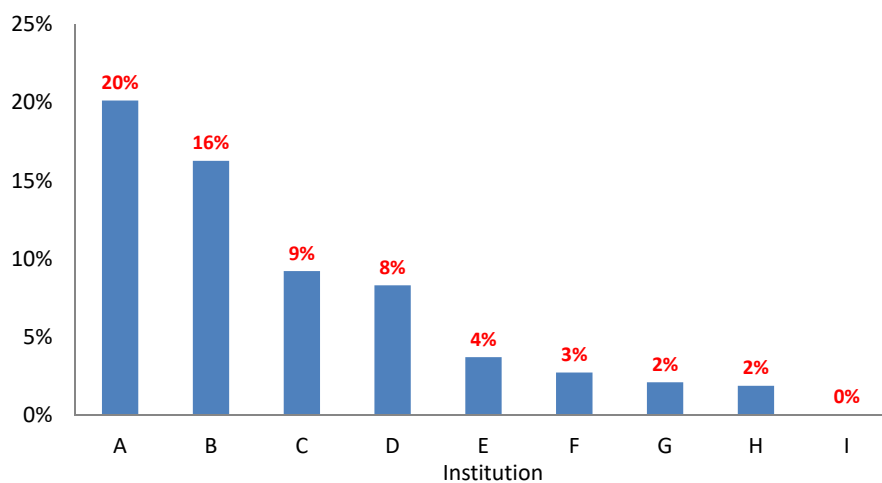


## Using Student Portals & LMS

How will posting unique NSSE survey links to student portals and learning management systems change response rates?

## Using Student Portals & LMS

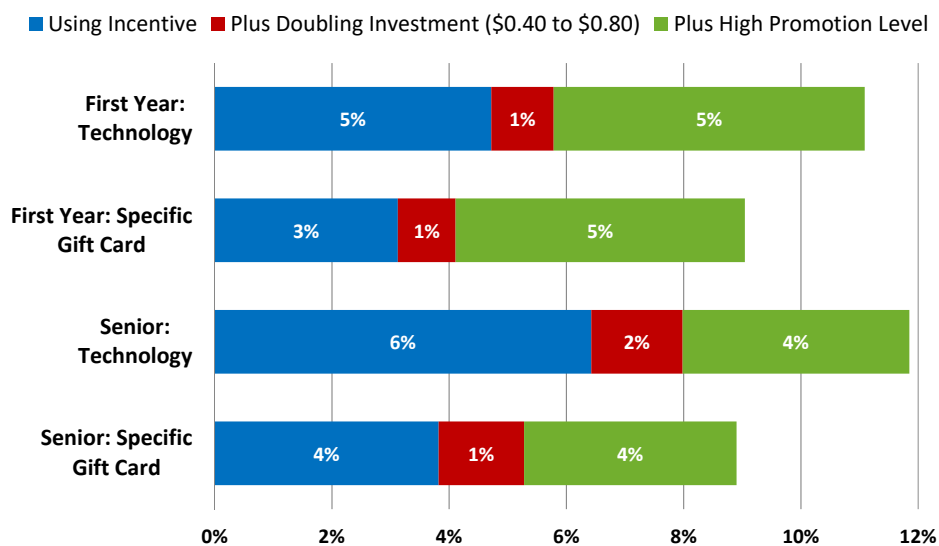
Response Rate % Point Increase: LMS with Email Recruitment Method



## Using Incentives and Promotions

Are incentives or other campus promotional efforts worth the cost and effort?

### Change in Predicted Response Rates (by class level & Incentive Type)



16



## Using Social Media

Will students use social media along with standard email recruitment methods?

## Social Media

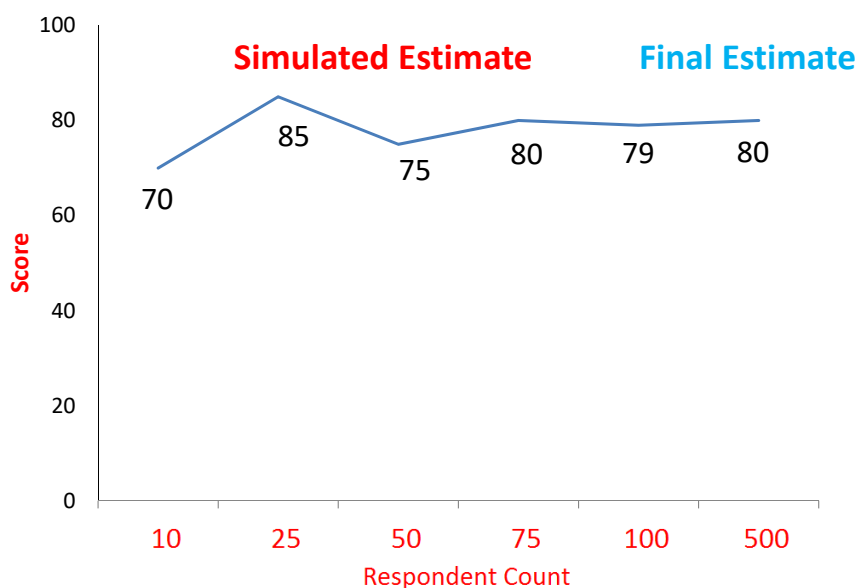
**Social media does not appear to be an effective way to increase response**

School	Facebook	Twitter	Instagram	Total
1	4.7%	0.2%	0.2%	<b>5.1%</b>
2	1.2%	1.6%	1.4%	<b>4.2%</b>
3	0.0%	0.0%	2.7%	<b>2.7%</b>
4	0.6%	0.3%	0.7%	<b>1.6%</b>
5	1.3%	0.0%	0.0%	<b>1.3%</b>
6	0.6%	0.3%	0.3%	<b>1.1%</b>
7	0.6%	0.2%	0.0%	<b>0.8%</b>
8	0.4%	0.2%	0.0%	<b>0.6%</b>
9	0.2%	0.2%	0.1%	<b>0.5%</b>
10	0.0%	0.5%	0.0%	<b>0.5%</b>
11	0.0%	0.0%	0.4%	<b>0.4%</b>
12	0.0%	0.0%	0.2%	<b>0.2%</b>

## How Much Data is Enough?

What response rate or respondent count is needed before NSSE estimates stabilize?

### Hypothetical Level of Effort Analysis



## How Much Data is Enough?

Response rates between 5% and 25% appear to provide reliable first-year or senior survey estimates, depending on school size and measure.

Between 25 and 75 respondents appear to provide reliable survey estimates.

Intuitively, the larger the institution, the more data one needs.

## Discussion / Q&A

- Your thoughts?
- What works on your campus?
- Do you conduct experiments?

## For More Information

Sarraf, S., Hurtado, S., Houlemaarde, M., & Wang, X. (2016). An Alternative Approach: Using **Panels** to Survey College Students. *Professional Files*, Fall 2016 (168). [∞](#)

Sarraf, S., Brooks, J., Cole, J., & Wang, X., (May, 2015). *What is the Impact of **Smartphone Optimization** on Long Surveys?* Paper presented at the American Association for Public Opinion Research Annual Conference. Hollywood, FL. [∞](#)

Sarraf, S. (September, 2016). *Survey Recruitment Using **Student Portals and Learning Management Systems***. Webinar presented. Bloomington, IN. [∞](#)

Sarraf, S. & Cole, J. S. (May, 2014). ***Survey Lottery Incentives** and Institutional Response Rates: An Exploratory Analysis*. Paper presented at the Association for Institutional Research Annual Forum. Orlando, FL. [∞](#)

Fosnacht, K., Sarraf, S., Howe, E., & Peck, L., (2017). How Important are High **Response Rates** for College Surveys? *Review of Higher Education*, 40(2), 245-265. [∞](#)

Sarraf, S. (May 2019). How are survey response rates changing? Findings from NSSE. Poster presentation at the Association for Institutional Research Annual Forum. Denver, CO. [∞](#)

-- Click on link icon (∞) to see paper, slides, or webinar.

## Other Topics of Interest

- Drawing inferences from small sample sizes (see NSSE [resource](#))
- Using NSSE data effectively to effect change—see NSSE’s [Lessons from the Field](#) series
- Addressing survey fatigue on campus. (It is critical to coordinate surveys on campus, possibly using a formal approval process with a standing committee. See IUB’s approach [here](#). Administering a limited number of short, well written surveys cannot hurt either.)
- Non-response effect estimation techniques. See [NSSE’s approach](#).
- Dealing with ordinal or interval scale questions (contact me about this broad topic)

# Thank you!

---

Questions or comments about this presentation? Contact  
Shimon at [ssarraf@indiana.edu](mailto:ssarraf@indiana.edu)